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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,898

12/13/2005

David W Morris

PP23367.0003/20366-020US1

1969

55255 7590 02/28/2008
Novartis Vaccines and Diagnostics, Inc.
Corporate Intellectual Property
P.O. BOX 8097
EMERYVILLE, CA 94662-8097

EXAMINER

DAVIS, MINH TAM B

ART UNIT

PAPER NUMBER

1642

MAIL DATE

DELIVERY MODE

02/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,898	Applicant(s) MORRIS ET AL.	
	Examiner MINH-TAM DAVIS	Art Unit 1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 27, 29 and 32-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-26, 28, 30, 31 and 39-74 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-74 are pending.

Claims 27, 29, 32 and its dependent claims 33-38 have been withdrawn from consideration. The claims are drawn to a polynucleotide or a method for screening cancer, by detecting a polynucleotide. However, the cited sequences are polypeptides, not polynucleotides.

Accordingly, claims 1-26, 28, 30-31, 39-74 for subjected to the following restriction requirement.

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group A, claim(s) 1-15, 28, 30, drawn to the nucleic acid SEQ ID NO:607.

Group B, claim(s) 1-15, 28, 30, drawn to a nucleic acid as recited in claim 1. Each nucleic acid constitutes a single, distinct invention.

Group C, claims 16-20, 31, drawn to a protein as recited in claim 16. Each protein constitutes a single, distinct invention.

Group D, claims 21-26, drawn to an antibody to a protein as recited in claim 16.

An antibody to each protein constitutes a single, distinct invention.

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Group E, claims 39-40, 61-68, drawn to a method for detecting cancer, by detecting a protein as cited in claim 39, or a combination thereof. A method for detecting each cancer, as recited on pages 7-9 in the specification, using each protein, or each combination thereof constitutes as single, distinct invention.

Group F, claim 40, drawn to a method for detecting cancer, by detecting a serum antibody to a protein as cited in claim 39. A method for detecting each cancer, as recited on pages 7-9 in the specification, using an antibody to each protein constitutes as single, distinct invention.

Group G, claims 42-43, 45, drawn to a method for screening an inhibitor of the transcription of the encoding nucleic acid as recited in claim 42, which inhibitor is a modulator of the sequences cited in claim 45. A method using each modulator of the sequences cited in claim 45, for testing each nucleic acid recited in claim 42 constitutes a single, distinct invention.

Group H, claims 42-44, 46, drawn to a method for screening a modulator of a protein, encoded by a nucleic acid as recited in claim 42, which modulator is an antagonist of a G-protein coupled receptor protein, and modulates of the activity of the sequences cited in claim 46. A method using each modulator of the sequences cited in claim 46, for testing each protein recited in claim 42 constitutes a single, distinct invention.

Group I, claims 42-44, 47, drawn to a method for screening a modulator of a protein, encoded by a nucleic acid as recited in claim 42, which modulator is an antagonist of a calcium binding protein, and modulates of the activity of the sequences

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cited in claim 47. A method using each modulator of the sequences cited in claim 47, for testing each protein recited in claim 42 constitutes a single, distinct invention.

Group J, claims 42-44, 48, drawn to a method for screening a modulator of a protein, encoded by a nucleic acid as recited in claim 42, which modulator is an antagonist of a ubiquitin cycle protein, and modulates of the activity of the sequences cited in claim 48. A method using each modulator of the sequences cited in claim 48, for testing each protein recited in claim 42 constitutes a single, distinct invention.

Group K, claim 49, 56-63, 66-74, drawn to a method for drawn to a method for detecting cancer, by detecting a nucleic acid as cited in claim 49, or a combination thereof. A method for detecting each cancer, as recited on pages 7-9 in the specification, using each nucleic acid, or each combination thereof constitutes as single, distinct invention.

Group L, claims 50, 52, drawn to a method for treating cancer, using an inhibitor of the transcription of the encoding nucleic acid as recited in claim 50, which inhibitor is a modulator of the sequences cited in claim 52. A method for treating each cancer as recited on pages 7-9 of the specification, using each modulator of the sequences cited in claim 52, which inhibits the transcription of each nucleic acid recited in claim 50 constitutes a single, distinct invention.

Group M, claims 50-51, 53, drawn to a method for treating cancer, using an inhibitor of a protein cited in claim 50, which inhibitor is an antagonist of a G-protein coupled receptor protein, and modulates of the activity of the sequences cited in claim 53. A method of treating each cancer as recited on pages 7-9 of the specification, using each

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modulator of the sequences cited in claim 53, which inhibits each protein recited in claim 50 constitutes a single, distinct invention.

Group N, claims 50-51, 54, drawn to a method for treating cancer, using an inhibitor of a protein cited in claim 50, which inhibitor is an antagonist of a calcium binding protein, and modulates of the activity of the sequences cited in claim 54. A method for treating each cancer as recited on pages 7-9 of the specification, using each modulator of the sequences cited in claim 54, which inhibits each protein recited in claim 50 constitutes a single, distinct invention.

Group O, claims 50-51, 55, drawn to a method for treating cancer, using an inhibitor of a protein cited in claim 50, which inhibitor is an antagonist of a ubiquitin cycle protein, and modulates of the activity of the sequences cited in claim 55. A method for treating each cancer as recited on pages 7-9 of the specification, using each modulator of the sequences cited in claim 55, which inhibits each protein recited in claim 50 constitutes a single, distinct invention.

The inventions are distinct, each from the other because of the following reasons:

According to PCT Rule 13.2, unity of invention exists only when the shared same or corresponding technical feature is a contribution over the prior art. The inventions listed as groups A-O do not relate to a single general inventive concept because they lack the same or corresponding special technical feature. A nucleic acid molecule comprising at least 10 nucleotides of SEQ ID NO:607 of group A is shown to be the same as the nucleic acid molecule SEQ ID NO:19, taught by Tang et al (US 6,743,619), which is 99.5% similar to SEQ ID NO:607 (MPSRCH search result, 2008, us-10-540-898-607.rni,

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result 1, pages 1-5). Thus the claimed invention lacks novelty and does not make a contribution over the prior art.

MPSRCH search result, 2008, us-10-540-898-607.rni, result 1, pages 1-5

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RESULT 1
US-09-774-528-19
; Sequence 19, Application US/09774528
; Patent No. 6743619
; GENERAL INFORMATION:
; APPLICANT: Tang, Y. Tom
; APPLICANT: Zhou, Ping
; APPLICANT: Goodrich, Ryle
; APPLICANT: Liu, Chenghua
; APPLICANT: Asundi, Vinod
; APPLICANT: Ren, Feiyan
; APPLICANT: Zhang, Jie
; APPLICANT: Zhao, Qing A.
; APPLICANT: Yang, Yonghong
; APPLICANT: Xue, Aidong J.
; APPLICANT: Wehrman, Tom
; APPLICANT: Wang, Jian-Rui
; APPLICANT: Wang, Dunrui
; APPLICANT: Drmanac, Radoje T.
; TITLE OF INVENTION: No. 6743619el Nucleic Acids and
; TITLE OF INVENTION: Polypeptides
; FILE REFERENCE: 802
; CURRENT APPLICATION NUMBER: US/09/774,528
; CURRENT FILING DATE: 2001-01-30
; NUMBER OF SEQ ID NOS: 441
; SOFTWARE: pt_FL_genes Version 2.0
; SEQ ID NO 19
; LENGTH: 4808
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (818)..(2359)
US-09-774-528-19
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Query Match          99.5%; Score 3821; DB 3; Length 4808;
Best Local Similarity 99.8%; Pred. No. 0;
Matches 3835; Conservative 0; Mismatches 5; Indels 1; Gaps 1;
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Qy      1 TGTTCACACTGATTCTCGTGACTTTAAGGACCAGGGATTGAAGAGGTATTAGCTCTTC 60
        |||
Db      173 TGTTCACACTGATTCTCGTGACTTTAAGGACCAGGGATTGAAGAGGTATTAGCTCTTC 232

Qy      61 CCAGGAAGGGAGGAAGTTTCTGGAAGAGAAGGGAAAGACGGCAGACGCTGCGCTGGGACC 120
        |||
Db      233 CCAGGAAGGGAGGAAGTTTCTGGAAGAGAAGGGAAAGACGGCAGACGCTGCGCTGGGACC 292

Qy      121 AGCAGAGCCTGAGGAGCTGTGGGAAGCTGACAGAGCCCAGCCAAAGGAGCGGGAAGGAGC 180
        |||
Db      293 AGCACAGCCTGAGGAGCTGTGGGAAGCTGACAGAGCCCAGCCAAAGGAGCGGGAAGGAGC 352

Qy      181 CGCAGCCCCAGGCTGGCACTGTGTTCTGAAAGATTGAACTCAAGCTGCTTTTACGGAA 240
        |||
Db      353 CGCAGCCCCAGGCTGGCACTGTGTTCTGAAAGATTGAACTCAAGCTGCTTTTACGGAA 412

Qy      241 GAGGGGCCACTTCAGAGGGCACCCAGAATTGGTTGAGCTCTTCTACTCTGGATGCCCC 300
        |||
Db      413 GAGGGGCCACTTCAGAGGGCACCCAGAATTGGTTGAGCTCTTCTACTCTGGATGCCCC 472

Qy      301 CTGCTCTGAGGAGCCTGCCACTGAGAACCAAAGAAGATAAGAGGACAGATACTTTTCTT 360
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Db      473 CTGCTCTGAGGAGCCTGCCACTGAGAACCAAAGAAGATAAGAGGACAGATACTTTTCTT 532
Qy      361 CAAGCACAGAGCTGGTGGGTGGAGTCAGGCATCTGCACCCCTAGTGGCTGTCTGGTGAG 420
|||||
Db      533 CAAGCACAGAGCTGGTGGGTGGAGTCAGGCATCTGCACCCCTAGTGGCTGTCTGGTGAG 592
Qy      421 GAATTTCTGTTTCTTCCCAGCTTGC GGCTTCAGTGCTTGATGGGGCTGCCTGTTGGTGG 480
|||||
Db      593 GAATTTCTGTTTCTTCCCAGCTTGC GGCTTCAGTGCTTGATGGGGCTGCCTGTTGGTGG 652
Qy      481 ATCAGTTTTTGCAGTGCCTGGTAGGAGTGGAGAGCCGTGGGAAGAGGTCTGCGGCGCCC 540
|||||
Db      653 ATCAGTTTTTGCAGTGCCTGGTAAGAGTGGAGAGCCGTGGGAAGAGGTCTGCGGCGCCC 712
Qy      541 AAGCCTGGGTTCACCCCAAGACTAAGTTCTTTCCCAAGTTAGAGAAGAAGAGAGAAAGCA 600
|||||
Db      713 AAGCCTGGGTTCACCCCAAGACTAAGTTCTTTCCCAAGTTAGAGAAGAAGAGAGAAAGCA 772
Qy      601 AAAAGAAGAGAGGAAAGTTCTCCCTTCCCTCCTCCGTGCCTGTCATGTCCTCTAAGCCA 660
|||||
Db      773 AAAAGAAGAGAGGAAAGTTCTCCCTTCCCTCCTCCGTGCCTGTCATGTCCTCTAAGCCA 832
Qy      661 GAGCCGAAGGACGTCCACCAACTGAACGGGACTGGCCCTTCTGCCTCTCCCTGCTCTTCA 720
|||||
Db      833 GAGCCGAAGGACGTCCACCAACTGAACGGGACTGGCCCTTCTGCCTCTCCCTGCTCTTCA 892
Qy      721 GATGGCCCAGGGAGAGAGCCCTTGGCTGGGACCTCAGAGTTCTGGGGCTGATGGGGCT 780
|||||
Db      893 GATGGCCCAGGGAGAGAGCCCTTGGCTGGGACCTCAGAGTTCTGGGGCTGATGGGGCT 952
Qy      781 GGGGTAGAGGTGGTGATTGAGTCTCGGGCCAACGCCAAGGGGGTTCGGGAGGAGGACGCC 840
|||||
Db      953 GGGGTAGAGGTGGTGATTGAGTCTCGGGCCAACGCCAAGGGGGTTCGGGAGGAGGACGCC 1012
Qy      841 CTGCTGGAGAACGGGAGCCAGAGCAACGAAAGTGACGACGTCAGCACAGACCGTGGCCCT 900
|||||
Db      1013 CTGCTGGAGAACGGGAGCCAGAGCAACGAAAGTGACGACGTCAGCACAGACCGTGGCCCT 1072
Qy      901 GCGCCACCTTCCCCGCTCAAGGAGACCTCCTTTTCCATCGGGCTGCAAGTACTGTTTCCA 960
|||||
Db      1073 GCGCCACCTTCCCCGCTCAAGGAGACCTCCTTTTCCATCGGGCTGCAAGTACTGTTTCCA 1132
Qy      961 TTCCTCCTGGCAGGCTTTGGGACCGTGGCTGCTGGCATGGTGTGGACATCGTCAGCAC 1020
|||||
Db      1133 TTCCTCCTGGCAGGCTTTGGGACCGTGGCTGCTGGCATGGTGTGGACATCGTCAGCAC 1192
Qy      1021 TGGGAAGTCTTCCAGAAGGTGACAGAGGTCTTCATCCTAGTGCCTGCGCTGCTGGGGCTC 1080
|||||
Db      1193 TGGGAAGTCTTCCAGAAGGTGACAGAGGTCTTCATCCTAGTGCCTGCGCTGCTGGGGCTC 1252
Qy      1081 AAAGGGAACCTGGAAATGACCCTGGCATCAAGGCTTTCCACTGCAGCCAACATTGGACAC 1140
|||||
Db      1253 AAAGGGAACCTGGAAATGACCCTGGCATCAAGGCTTTCCACTGCAGCCAACATTGGACAC 1312
Qy      1141 ATGGACACACCCAAGGAGCTCTGGCGGATGATCACTGGGAACATGGCCCTCATCCAGGTG 1200
|||||
Db      1313 ATGGACACACCCAAGGAGCTCTGGCGGATGATCACTGGGAACATGGCCCTCATCCAGGTG 1372
Qy      1201 CAGGCCACGGTGGTGGGCTTCTGGCGTCCATCGCAGCCGTCGTCTTTGGCTGGATCCCT 1260
|||||
Db      1373 CAGGCCACGGTGGTGGGCTTCTGGCGTCCATCGCAGCCGTCGTCTTTGGCTGGATCCCT 1432
Qy      1261 GATGGCCACTTCAGTATTCGCGACGCCTTCTGCTCTGTGCTAGCAGCGTGGCCACAGCC 1320
|||||
Db      1433 GATGGCCACTTCAGTATTCGCGACGCCTTCTGCTCTGTGCTAGCAGCGTGGCCACAGCC 1492
Qy      1321 TTCATTGCCTCCCTGGTACTGGGTATGATCATGATTGGAGTCATCATTGGCTCTCGCAAG 1380
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Db 1493 TTCATTGCCTCCCTGGTACTGGGTATGATCATGATTGGAGTCATCATTGGCTCTCGCAAG 1552

Qy 1381 ATTGGGATCAACCCAGACAACGTGGCCACACCCATTGCTGCCAGCCTGGGCGACCTCATC 1440
|||||

Db 1553 ATTGGGATCAACCCAGACAACGTGGCCACACCCATTGCTGCCAGCCTGGGCGACCTCATC 1612

Qy 1441 ACCTTGGCGCTGCTCTCAGGCATCAGCTGGGGACTCTACCTGGAAGTGAATCACTGGCGA 1500
|||||

Db 1613 ACCTTGGCGCTGCTCTCAGGCATCAGCTGGGGACTCTACCTGGAAGTGAATCACTGGCGA 1672

Qy 1501 TACATCTACCCACTGGTGTGTGCTTTCTTTGTGGCCCTGCTGCCTGTCTGGGTGGTGTG 1560
|||||

Db 1673 TACATCTACCCACTGGTGTGTGCTTTCTTTGTGGCCCTGCTGCCTGTCTGGGTGGTGTG 1732

Qy 1561 GCCCCACGAAGTCCAGCCACAAGGGAGGTGTTGTACTCGGGCTGGGAGCCTGTTATCATT 1620
|||||

Db 1733 GCCCCACGAAGTCCAGCCACAAGGGAGGTGTTGTACTCGGGCTGGGAGCCTGTTATCATT 1792

Qy 1621 GCCATGGCCATCAGCAGTGTGGGAGGCCTCATCTTGGACAAGACTGTCTCAGACCCCAAC 1680
|||||

Db 1793 GCCATGGCCATCAGCAGTGTGGGAGGCCTCATCTTGGACAAGACTGTCTCAGACCCCAAC 1852

Qy 1681 TTTGCTGGGATGGCTGTCTTCACGCCTGTGATTAATGGTGTGGGGGCAATCTGGTGGCA 1740
|||||

Db 1853 TTTGCTGGGATGGCTGTCTTCACGCCTGTGATTAATGGTGTGGGGGCAATCTGGTGGCA 1912

Qy 1741 GTGCAGGCCAGCCGCATCTCCACCTTCCTGCACATGAATGGAATGCCCGAGAGAAGTCT 1800
|||||

Db 1913 GTGCAGGCCAGCCGCATCTCCACCTTCCTGCACATGAATGGAATGCCCGAGAGAAGTCT 1972

Qy 1801 GAGCAAGCTCCTCGCCGCTGTCCAGTCCTTGTACCACCTTCTTCAGCCCTGATGTGAAT 1860
|||||

Db 1973 GAGCAAGCTCCTCGCCGCTGTCCAGTCCTTGTACCACCTTCTTCAGCCCTGATGTGAAT 2032

Qy 1861 TCTCGCTCAGCCCGGGTCTCTTCTCCTCGTGGTCCCAGGACACCTGGTGTTCCTCTAC 1920
|||||

Db 2033 TCTCGCTCAGCCCGGGTCTCTTCTCCTCGTGGTCCCAGGACACCTGGTGTTCCTCTAC 2092

Qy 1921 ACCATCAGCTGTATGCAGGGCGGGCACACCACCCTCACACTCATCTTCATCATCTTCTAT 1980
|||||

Db 2093 ACCATCAGCTGTATGCAGGGCGGGCACACCACCCTCACACTCATCTTCATCATCTTCTAT 2152

Qy 1981 ATGACAGCTGCACTGCTCCAGGTGCTGATTCTCCTGTACATCGCAGACTGGATGGTGCAC 2040
|||||

Db 2153 ATGACAGCTGCACTGCTCCAGGTGCTGATTCTCCTGTACATCGCAGACTGGATGGTGCAC 2212

Qy 2041 TGGATGTGGGGCCGGGGCCTGGACCCGGACAACCTTCTCCATCCCATACTTGACTGCTCTG 2100
|||||

Db 2213 TGGATGTGGGGCCGGGGCCTGGACCCGGACAACCTTCTCCATCCCATACTTGACTGCTCTG 2272

Qy 2101 GGGGACCTGCTTGGCACTGGGCTCCTAGCACTCAGCTTCCATGTTCTCTGGCTCATAGGG 2160
|||||

Db 2273 GGGGACCTGCTTGGCACTGGGCTCCTAGCACTCAGCTTCCATGTTCTCTGGCTCATAGGG 2332

Qy 2161 GACCGAGACACGGATGTCGGGGACTAGCTTGGTCACTCAACATTTTCCCCATCCCTCTGC 2220
|||||

Db 2333 GACCGAGACACGGATGTCGGGGACTAGCTTGGTCACTCAACATTTTCCCCATCCCTCTGC 2392

Qy 2221 ACTTTCTATTTGAAATTTTCTTTTGTTCCTGTCCCTCCTCCACCCACACTCCCACC 2280
|||||

Db 2393 ACTTTCTATTTGAAATTTTCTTTTGTTCCTGTCCCTCCTCCACCCACACTCCCACC 2452

Qy 2281 TCTTTCTAGGACTTCACTTTGATACAAATTCTCATTATTTCAATGGGAATTTTATAC 2340
|||||

Db 2453 TCTTTCTAGGACTTCACTTTGATACAAATTCTCATTATTTCAATGGGAATTTTATAC 2512

Qy 2341 ATTGAGCCAAGTTTGTATAGCAAGAATTTGGGAAACACAGATGGCCTGAGATAAGCAGTA 2400
|||||

Db 2513 ATTGAGCCAAGTTTGTATAGCAAGAATTTGGGAAACACAGATGGCCTGAGATAAGCAGTA 2572

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Qy	2401	CAAGTAGGTTTTTGGAGACAATCACCAGTGCAGTTTCATGGTGGGTGCCTCCAGGTGATG	2460
Db	2573	CAAGTAGGTTTTTGGAGACAATCACCAGTGCAGTTTCATGGTGGGTGCCTCCAGGTGATG	2632
Qy	2461	TGGACTGGAGCAGGGGAGTTTTGTCTGGAATCTGGGGACATGGGGTTTGGCTTTAGCAAC	2520
Db	2633	TGGACTGGAGCAGGGGAGTTTTGTCTGGAATCTGGGGACATGGGGTTTGGCTTTAGCAAC	2692
Qy	2521	CTGTCTTGCCCTAATGAGAAACCCCTTTGTAAGTGGGCTCTGGATTTTGGTTTTGTTTT	2580
Db	2693	CTGTCTTGCCCTAATGAGAAACCCCTTTGTAAGTGGGCTCTGGATTTTGGTTTTGTTTT	2752
Qy	2581	CTTTTTATCTGTTTTGTTTTATTTTTGGTTTTGGTTGAACAGAGGGACAGAAGAATAAGT	2640
Db	2753	CTTTTTATCTGTTTTGTTTTATTTTTGGTTTTGGTTGAACAGAGGGACAGAAGAATAAGT	2812
Qy	2641	AACACTCCCAAACACAGACATACTTTTGTAGAAGTGGACCAACTTCAAAGCTCTGGACAG	2700
Db	2813	AACACTCCCAAACACAGACATACTTTTGTAGAAGTGGACCAACTTCAAAGCTCTGGACAG	2872
Qy	2701	GAGACACCTGCTCCAGGCCCTGTGATCCAGTCTCTGTCTCTTGCCCTCTGGACCTAAG	2760
Db	2873	GAGACACCTGCTCCAGGCCCTGTGATCCAGTCTCTGTCTCTTGCCCTCTGGACCTAAG	2932
Qy	2761	CGTCCCCTCGCAGAAAGAGTAAGGTGGACTGACTTTTCAATTTGTGCACATGCCTCTT	2820
Db	2933	CGTCCCCTCGCAGAAAGAGTAAGGTGGACTGACTTTTCAATTTGTGCACATGCCTCTT	2992
Qy	2821	GTTCAATGGCCTGGTCAACATCAACAACCCCTCCCTCTGATCATTTCCAGTTGATTGTCA	2880
Db	2993	GTTCAATGGCCTGGTCAACATCAACAACCCCTCCCTCTGATCATTTCCAGTTGATTGTCA	3052
Qy	2881	TATCCAGGAAAAAATGGAACAGTGCCTCTCTCCCTGTTGACCATGTCCACCTATTGG	2940
Db	3053	TATCCAGGAAAAAATGGAACAGTGCCTCTCTCCCTGTTGACCATGTCCACCTATTGG	3112
Qy	2941	TTCCCCAAAATCCACATTCTCCCTGGGCCCAGATGACTTTGTCTCCCTGGGCCCAGATTC	3000
Db	3113	TTCCCCAAAATCCACATTCTCCCTGGGCCCAGATGACTTTGTCTCCCTGGGCCCAGATTC	3172
Qy	3001	TTTGTCTCTCTTCAACCTTCATCTCAAATTGTCTCTAAGCACTACCTTCCCCAGAGCTTG	3060
Db	3173	TTTGTCTCTCTTCAACCTTCATCTCAAATTGTCTCTAAGCACTACCTTCCCCAGAGCTTG	3232
Qy	3061	CCAGGTTGGGTTTTGAGATTAGGGTCAGGTCATGGGTATGTGGAGAATGGTTTGGAGGTT	3120
Db	3233	CCAGGTTGGGTTTTGAGATTAGGGTCAGGTCATGGGTATGTGGAGAATGGTTTGGAGGTT	3292
Qy	3121	GAGGACAACCACAGGTGTCTCATTGCTGCCATTTCTCCTGAGGACATAATCACTTGGTCA	3180
Db	3293	GAGGACAACCACAGGTGTCTCATTGCTGCCATTTCTCCTGAGGACATAATCACTTGGTCA	3352
Qy	3181	CCTTGGACCTGTCACTTCTCTAAAATTACTCGTTCTGTCTATGCCATAGAGGTGAGTTTTC	3240
Db	3353	CCTTGGACCTGTCACTTCTCTAAAATTACTCGTTCTGTCTATGCCATAGAGGTGAGTTTTC	3412
Qy	3241	CTCTTTCTTGGCTTCTACCCACAAACATTACCAATCATTTATTTCGTTTATTAGCAAAT	3300
Db	3413	CTCTTTCTTGGCTTCTACCCACAAACATTACCAATCATTTATTTCGTTTATTAGCAAAT	3472
Qy	3301	ATGCAGCCTCCGCAAGATGAGCTCTCCTGCAGACAAGCATGGTCTGAAACATTCTTTGAG	3360
Db	3473	ATGCAGCCTCCGCAAGATGAGCTCTCCTGCAGACAAGCATGGTCTGAAACATTCTTTGAG	3532
Qy	3361	CAATAT-TTATTGAGTGCCTACTATGTGTTAGGTACTGTGCCAGGCACTGATAAGCCAGT	3419
Db	3533	CAATATCATATTGAGTGCCTACTATGTGTTAGGTACTGTGCCAGGAACTGATAAGCCAGT	3592

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Qy      3420 GGTAAGGGAAACACAGCTCTAACCTCACCTCATTCTCCAGGTTACAAAGGCCATGTGCCC 3479
          |||||||
Db      3593 GGTAAGGGAAACACAGCTCTAACCTCACCTCATTCTCCAGGTTACAAAGGCCATGTGCCC 3652
          |||||||
Qy      3480 CTTTGAATCTGGCAGAGAAAGTTTCCTCGTTGTAAGTATTTGCATCTACTTCAAGCCAGA 3539
          |||||||
Db      3653 CTTTGAATCTGGCAGAGAAAGTTTCCTCGTTGTAAGTATTTGCATCTACTTCAAGCCAGA 3712
          |||||||
Qy      3540 TTCTTCTGCCTCTTTCTCCTTTCCAGACCCCTACTCTGTGCAGTGCTGACCACAGCTAGA 3599
          |||||||
Db      3713 TTCTTCTGCCTCTTTCTCCTTTCCAGACCCCTACTCTGTGCAGTGCTGACCACAGCTAGA 3772
          |||||||
Qy      3600 GCCACCGCCCCATTGCTCAACCAGTATTTATTTCCCTAAACGACCCCTTCCTCATATTCCC 3659
          |||||||
Db      3773 GCCACCGCCCCATTGCTCAACCAGTATTTATTTCCCTAAACGACCCCTTCCTCACATTCCC 3832
          |||||||
Qy      3660 TTCCCTCCACCTCTCCTTACCAAGCACCCAAAAGAGGATTTAGAACTAGCAGGTTGGACA 3719
          |||||||
Db      3833 TTCCCTCCACCTCTCCTTACCAAGCACCCAAAAGAGGATTTAGAACTAGCAGGTTGGACA 3892
          |||||||
Qy      3720 TCATCTGGTTGTTTCTACTTTTCTCTGCCTAGCACAAAATTGGGAGAAAAGTGGAGCCTC 3779
          |||||||
Db      3893 TCATCTGGTTGTTTCTACTTTTCTCTGCCTAGCACAAAATTGGGAGAAAAGTGGAGCCTC 3952
          |||||||
Qy      3780 CATCCGCAGTCACACGTGTACAGATCTGGGGATTGGATGTAGGCTTTTCTAAGTTCTC 3839
          |||||||
Db      3953 CATCCGCAGTCACACGTGTACAGATCTGGGGATTGGATGTAGGCTTTTCTAAGTTCTC 4012
          |||||||
Qy      3840 T 3840
          |
Db      4013 T 4013

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Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement may be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH-TAM DAVIS whose telephone number is 571-272-0830. The examiner can normally be reached on 9:00 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LARRY HELMS can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MINH TAM DAVIS
February 26, 2008

/Larry R. Helms/

Supervisory Patent Examiner, Art Unit 1643

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